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ABSTRACT

Most youth in America have a good chance of becoming productive members of adult society. However, for a particular group of young people, at-risk youth, the probability of maturing into responsible adulthood is less certain. "At-risk youth" is a term commonly used to describe those adolescents for whom there is a high probability (risk) of negative life events, because their demographic, individual, economic, or social characteristics predict that they are vulnerable. This paper reviews research on risk and resilience from two primary disciplines--developmental psychology/psychopathology and social demography/sociology. The paper is one piece of a larger research endeavor, "Pathways to Achievement Among At-Risk Youth," that focuses on socioeconomic achievements among disadvantaged adolescents. The review briefly summarizes research approaches, operationalizations, and key findings from the two research traditions. The goal of the review is to highlight consistencies across disciplines in hopes of developing a coherent framework that can be used to study resilient behavior among at-risk youth. From this interdisciplinary perspective, the paper attempts to extract a more comprehensive list of both risk and protective factors, and a sense of the range of options in operationalizing these variables. The paper concludes by integrating these findings into a new conceptual framework for understanding resilience among disadvantaged youth. (Contains 51 references.) (EV)

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RISK, VULNERABILITY, AND RESILIENCE AMONG YOUTH: IN SEARCH OF A CONCEPTUAL FRAMEWORK

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INTRODUCTION

Most youth in America have a good chance of becoming productive members of adult society. However, for a particular group of young people, *at-risk youth*, the probability of maturing into responsible adulthood is less certain. "At-risk youth" is a term commonly used to describe those adolescents for whom there is a high probability (risk) of negative life events, because their demographic, individual, economic, or social characteristics predict that they are vulnerable (Dryfoos, 1990, pg. 5).

Sociologists and demographers have published numerous studies exploring the factors contributing to adult life outcomes among youth deemed to be at risk. This set of studies has focused heavily, however, on the likelihood of negative life events rather than positive, or socially productive ones. Even when accomplishments of a more general nature are investigated, such as family formation, educational achievement or economic stability, the tendency is still to describe the negative aspects of those domains, such as early, non-marital childbearing (Myers and Moore, 1990), school drop out (Rumberger, 1983), and poverty (Moore, Myers, Morrison, Nord, Brown, and Edmonston, 1993), particularly among disadvantaged or at-risk youth. In fact, studies assessing resilient behavior or productive life events among youth are quite limited relative to the abundant research on negative life outcomes.

Beyond the fields of sociology and demography, however, the concept of resilience (i.e., success or adaptation in the presence of disadvantage) is hardly new. Within the areas of

psychopathology and child development, this issue has been a major focus of research (Rutter, 1987; Luthar, 1991; Werner, 1989; Germezy, 1985). The education literature has also explored positive adaptations, such as educational progress, attendance, and school completion among disadvantaged young people (Pollard, 1989; Connell, Spencer, and Aber, 1993). Although a few of these studies take a longitudinal approach or are epidemiologic in nature (Rutter, 1987; Werner, 1989) most of this work involves small and select samples, or are based on cross-sectional data analyses. Nonetheless, the information generated in the fields of developmental psychology and psychopathology could be particularly helpful in moving other social science disciplines toward a broader understanding of productive life events among young people.

Indeed, recently the disciplines of sociology and social demography have begun to incorporate findings from the research on resilience and adolescent development from the developmental and education literatures. Studies in the areas of sociology and social demography are now beginning to document positive achievements among at-risk youth (Clark, 1983; Dubow and Luster, 1990), and protective factors contributing to positive adaptations (Pollard, 1989; Wilson, 1987; Sugland, Blumenthal and Hyatt, 1993; Sugland and Hyatt, 1993; Furstenberg and Hughes, 1993; Brown, 1993a). Although most of these studies have a clearly defined theoretical base, there is still a lack of conceptual clarity with respect to the mechanisms through which protective factors minimize risk, and there is little consistency across studies with respect to how risk or resilience is defined.

Policy, programs, and future research targeted toward disadvantaged youth could well be informed by research conducted under a clear conceptual framework. However, because studies on resilience are being conducted in many scientific disciplines (i.e., education, sociology, mental health

and child development), researchers are often unaware or only peripherally aware of work being done by colleagues in other disciplines. Bridging this disciplinary gap could inform research in any one discipline in general, and could help shape the scientific discourse focusing specifically on adolescence. Further, a sharper conceptual framework on risk and resilience in adolescence could come from a melding of work in these disciplines (sociology, social demography, education, developmental psychology, and developmental psychopathology).

In this paper, we review research on risk and resilience from two primary disciplines -- developmental psychology/psychopathology and social demography/sociology. This paper is one piece of a larger research endeavor -- "Pathways to Achievement Among At-Risk Youth" -- that focuses on socioeconomic achievements among disadvantaged adolescents. This larger research effort documents that positive adaptations to disadvantage do indeed occur among at-risk youth, and that specific family and community-based investments in youth can be instrumental in fostering resilience in young adult life (See Brown, 1993a, Brown, 1993b; Sugland, Blumenthal, and Hyatt, 1993; Sugland and Hyatt, 1993; Furstenberg and Hughes, 1993 for full project analyses). However, analyses from this project also indicate that the process of resilience is highly complex. Our ability to understand these complexities is hindered by a lack of conceptual clarity and consistency concerning definitions of "risk" and "resilience", and the mechanisms through which resilience may emerge.

To provide a broader theoretical context for the larger project, we discuss the contributions and limitations of research on risk and resilience from these two research disciplines. Perhaps because these two bodies of work tend to focus on different age ranges (developmental psychology and psychopathology with younger children), tend to work with different samples (small and self-selected vs. more representative) and tend to focus on different definitions of risk and positive

development, few attempts have been made to summarize findings across these two disciplines. The present review briefly summarizes research approaches, operationalizations, and key findings from the two research traditions. Our goal is to highlight consistencies across disciplines in hopes of developing a coherent framework that can be used to study resilient behavior among at-risk youth. We make no claim that our critique is exhaustive. Rather we have chosen to highlight studies in these two disciplines that can enhance our understanding as to why some disadvantaged youth succeed against the odds, and the specific mechanisms through which that success is achieved. From this interdisciplinary perspective we will attempt to extract a more comprehensive list of both risk and protective factors, and a sense of the range of options in operationalizing these variables. We will conclude by integrating these findings into a new conceptual framework for understanding resilience among disadvantaged youth.

RESILIENCE IN THE DEVELOPMENTAL PSYCHOLOGY/PSYCHOPATHOLOGY LITERATURES

Within the disciplines of child development and child psychopathology, a longstanding problem has been the relative emphasis placed on problematic outcomes and the predictors of such outcomes, and the neglect of positive adaptations particularly under circumstances of stress and deprivation. Speaking specifically for the literature on childhood psychopathology, for example, Garmezy (1985, p.217) observed that:

> "predisposition and potentiation have always played central roles in psychopathologist' orientation to etiology and symptomatology in the mental disorders. Protective factors -- the inhibitors of pathogenic processes -- have played a negligible role either in theory construction or in the empirical researches of psychiatric investigations."

This imbalance has begun to be addressed in recent years. A growing body of research addresses the issue of "resilience" in children, that is, "the manifestation of competence in children despite exposure to stressful events" (Garmezy, Masten & Tellegen, 1984, p. 98). Yet it must be acknowledged that progress has been uneven. For example, most of the research on resilience in child development to date focuses on preadolescent children and young adults (Luthar, 1991). Luthar (1991) cautions that it may be inappropriate to generalize findings on childhood resilience from one age range to another, or from one population subgroup to another. Factors associated with resistance to stress may change as children develop, and may differ by socioeconomic and ethnic group. There is a noticeable gap in this literature on resilience among youth (an important exception being the work by Luthar, 1991). This gap contrasts sharply with the emphasis place on youth in the sociological and social demography approaches to resilience. Even very recent reviews of the child development literature on adolescence point repeatedly to the focus on problem behaviors, and a lack of research (sometimes even a lack of clear definition) on positive outcomes.

In a recent volume on adolescent health promotion, for example (Millstein, Petersen, & Nightingale, 1993), the absence of research on positive adolescent development is a recurring theme. Elliott (1993) acknowledges that there is ample evidence on which to base a description of a health compromising lifestyle among U.S. adolescents, but insufficient data to begin to describe a parallel cluster of health-promoting behaviors. Brooks-Gunn and Paikoff (1993) note that adolescent sexual behavior has been studied largely in terms of costs to individual teenagers and society. We have an extremely limited empirical base for describing healthy sexuality among adolescents. According to Compas (1993), far less attention has been given to defining positive adjustment and mental health among adolescents than towards such negative outcomes as depression and suicide. Finally, Earls

(1993) notes that we are lacking a portrayal of the health-supporting beliefs and behaviors of minority youth and their families.

Clearly there is a need to extend the empirical work conducted by developmentalists on resilience into the adolescent period, and to focus explicitly on variations by socioeconomic status and ethnicity. Before going on to describe the work on resilience among youth from the sociological and demographic traditions, however, it will be useful to recapitulate basic constructs and broad findings from the developmental literature to date on resilience among younger children.

Operationalizing Risk/Stress

A prerequisite for studying resilience in children is the presence in their lives of some form of stress. Studies of resilience have taken a number of different approaches to documenting such stress. Luthar and Zigler (1991), in their review of the evidence on resilience in childhood, identify four such approaches: (1) identifying the number of stressful life events the child has experienced; (2) identifying the number of smaller stressors, or hassles, that a child encounters daily; (3) studying groups of children exposed to such specific stressors as economic deprivation, war, or parental divorce; and (4) creating an index of risk that summates the child's exposure across such specific stressors as economic deprivation and parental divorce.

Luthar & Zigler provide an excellent summary of the strengths and limitations in each approach. Concerning the stressful life events approach, for example, there has been much methodological work addressing previous problems with measures. New approaches take into account variation in the weight individuals place on particular stressors, and distinguish between

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stressful life events that an individual may or may not have control over. At the same time, Luthar and Zigler observe that items used in life stress scales may themselves be manifestations of maladjustment. Thus, it may be inappropriate to use indices of life stress to predict to maladjustment. Further, while measures of life stress predict to later adjustment problems, significant relations also hold predicting in the other direction, that is from maladjustment at one point in time to life stresses at a later time point.

By contrast, daily hassles measures document smaller irritating experiences in everyday life. There is some evidence that measures of hassles are more strongly related to outcome variables (e.g. measures of psychological distress) than are major life stress measures. Further, daily hassles measures continue to predict to outcomes when life events are controlled, whereas life events do not predict significantly or predict only weakly to outcome variables when hassles are controlled. Although measures of life stress have been adapted for use with children, daily hassles in children have only begun to be studied. As for measures of life stress, there may be overlap in the content of measures of daily hassles and child outcomes addressing psychological distress.

The third approach to operationalizing stress is built on separate literatures examining positive child functioning in the face of such separate stressors as economic deprivation, physical problems, war, and parental psychopathology (Garmezy, 1985). Luthar and Zigler (1991) identify a number of problems with these literatures, including a failure to examine issues of selectivity. For example, do families and children differ prior to divorce? (There is some evidence that this may , indeed, be the case: Block, Block & Gjerde, 1986). To what extent are findings a reflection of the stressor being examined as opposed to preexisting characteristics? Further, studies of specific stressors often fail to include key contrast groups (e.g. they may study children functioning well or

poorly after divorce, but fail to include a contrast with children from intact families). Studies looking at economic deprivation fail to shed light on the specific processes or circumstances underlying the associations between poverty and child outcomes.

The final approach rests on calculation of the number of major risk factors present in the life of a child. This approach does not rest on the presence of any one particular stressor, and further, permits examination of the adjustment of children in the presence of one as opposed to multiple stressors. The fruitfulness of this approach is illustrated in Rutter's research on children on the Isle of Wight and an inner London borough (Rutter, 1979). The risk factors considered in this study were severe marital discord, low socioeconomic status, overcrowding or large family size, paternal criminality, maternal psychiatric disorder, and admission of the child into care by the local authority. Whereas the presence of a single stressor did not increase children's risk of psychiatric disorder, the presence of multiple stressors did. The presence of two to three stressors was associated with a fourfold increase, and the presence of four or more stressors was associated with a tenfold increase.

Operationalizing Protective Factors

Protective factors are characteristics or factors seen to ameliorate the effects of stress. Garmezy identifies three broad sets of variables that operate as protective factors: (1) child characteristics; (2) family characteristics; and (3) external supports.

As reviewed by Garmezy (1985) and by Luthar and Zigler (1991), dispositional characteristics in the child that appear to protect against the effects of stress include easy-going temperament,

internal locus of control, skills in social interactions, and sense of humor. Whereas Garmezy (1985) found the evidence to support the conclusion that higher IQ was a protective factor in children, Luthar and Zigler summarize more recent findings as contradictory on this factor.

Within the family, protective factors include an absence of severe discord, warmth and affection in parent-child relations, the absence of severe parental criticism of the child, and parental competence in individual functioning. Beyond the family, positive school environments, the child's choosing and identifying with resilient role models, and the social support available to the family all appear to operate as protective factors.

Alternative Models of Resilience

Empirical work on resilience in children delineates three basic models (Garmezy et al., 1984; Luthar & Zigler, 1991; Rutter, 1987). A compensatory model is a simple additive model, in which stressors decrease child competence but positive factors improve child outcomes. Researchers seek main effects of stress or protective factors to support this model. A protective vs. vulnerability model is interactive rather than additive. That is, individuals with high vs. low levels of the protective or vulnerability factor are expected to react differentially to stress. For example, highly intelligent children might show little decline in competence under conditions of high stress, but children with lower IQs would show declines in competence under such conditions. Interaction effects of stress and protective or vulnerability factors support such a model. Finally, a challenge model posits that stress can actually enhance child competence if the stress does not go beyond a certain level.

Which of these models best describes the evidence on resilience to date is open to debate. On the one hand, for example, Rutter (1987) places great emphasis on the vulnerability/protective mechanisms model, in which the reaction to stress is intensified or muted by the presence of other factors. Yet Luthar and Zigler (1991) find that to date the evidence indicates a relatively small increase in variance explained by interaction effects over main effects. They therefore conclude that the simple compensatory model provides the best fit with the child development data thus far.

Operationalizing Child Outcomes

There has been a strong tendency to focus on readily observable behaviors as outcome variables in studies of child resilience. In particular, research has relied heavily on teacher ratings of classroom behavior, peer ratings of interpersonal competence, and academic achievement recorded from school records and achievement tests (see, for example, the outcomes in Project Competence, Garmezy, Masten & Tellegen, 1984). An implicit assumption appears to be that competence in the face of stress should be readily observable to others in overt behavior.

Luthar (1991), notes that the lack of attention to more internal and subjective aspects of well-being may be problematic. The possibility exists that while functioning well in terms of overt behavior, highly stressed children may nevertheless not feel a sense of well-being. Luthar's recent study with a sample of low-income, predominantly minority, adolescents illustrates this possibility. Adolescents in this study showing high levels of competence despite high levels of stress simultaneously reported high levels of depression and anxiety.

Differences in Findings According to Outcome Studied

An important pattern that can be seen in the research on resilience to date is that findings differ according to the particular child outcome studied. That is, rather than a single pattern underlying response to stressful circumstances, there may be multiple patterns.

The complexity of findings is well illustrated by the reports of Project Competence (Masten et al., 1988). This study examined three composite child outcomes in a sample of urban 3-6 graders: classroom disruptiveness, classroom engagement, and academic achievement. For all three outcomes, children with more protective factors (including family qualities, socioeconomic status and IQ) showed better outcomes. When exposed to high levels of stress, however, such children tended to show lower scores on classroom engagement but not in achievement. Disruptiveness increased under conditions of high stress only when the single protective factor in the child's background was positive parenting.

Summary of the Child Development Perspective

There is a gap in the study of resilience in children within the disciplines of developmental psychology and psychopathology, particularly for the adolescent age group. The possibility that the factors associated with resilience differ for different ethnic and socioeconomic groups has been given limited attention within these disciplines and should be examined empirically. Though there are a number of approaches to operationalizing stress in the lives of children, it may be particularly fruitful to identify, and be able to summate, discrete current stress factors. Research points to the need to

use multiple indicators of child competence as outcomes, and to explore the possibility that different sets of vulnerability and protective factors are important to each.

RESILIENCE IN THE SOCIOLOGY AND SOCIAL DEMOGRAPHY LITERATURES

Exploring resilience among those at-risk is relatively new in sociology research, although studies documenting achievement outcomes and the factors contributing to those outcomes have been a part of the sociology literature for many years. As we observed in the developmental literature, however, current progress towards exploring resilience among at-risk youth is uneven. For example, most of the research on risk and resilient behavior in sociology focuses on adolescence and the period of transition to adulthood. Relatively fewer studies explore resilience among younger children (for exceptions see Spencer, 1989, and Dubow and Luster, 1990). Studies also tend to focus on problem behaviors rather than positive adaptations, and, with the exception of ethnographic work (See Middeton, 1993 for a review of selected ethnographies) and studies of educational achievement (Ogbu, 1978; Sue and Okazaki, 1990), resilience across ethnic groups or gender has received little attention. On the other hand, studies that do explore resilient behavior, appear to cluster in three specific domains. The first domain is a general exploration of positive life events and educational achievement; the second domain includes studies that specifically assess adaptation among youth at risk; and the third domain includes work on conceptualizations and theoretical models of resilience.

Studies on Positive Life Events and Academic Success

The status attainment literature is a prime example of a body of work that focuses on the factors and processes contributing to positive life events in adulthood. However, this research, although conducted for nearly three decades, is rarely explicitly couched in terms of risk or resilience. This work generally examines interconnections among family background variables (i.e., occupation and education of family head, number of siblings, family stability, race), school achievement, employment history, and socioeconomic stability (Blau and Duncan, 1967; Sewell and Shah, 1967; Alexander and Eckland, 1974; Marini, 1978; Portes and Wilson, 1976). For example, Blau and Duncan (1967) developed models to explain the educational and occupational attainment of adult males. They were specifically interested in family of origin and individual characteristics of the young men in their sample. They noted that social origins exerted considerable influence on occupational success of young males, but that the young man's own educational and early occupational experiences exerted a stronger influence on occupational success.

Blau and Duncan's early model has been used and revised by many, and has evolved to include social psychological factors, such as educational aspirations and the influence of significant others (Sewell and Shah, 1967), fertility and marital status for educational achievement among young women (Alexander and Eckland, 1974; Marini, 1978; Hofferth and Moore, 1979; Moore, Myers, Morrison, et al, 1993) and self-esteem for explorations of educational attainment among black men (Portes and Wilson, 1976). More recently, assessments of structural inequality and behavioral choices have been added to the basic status attainment model (Burke and Hoelter, 1988).

The traditional status attainment approach to understanding productive life events provides

descriptive information on how selected background characteristics, individual characteristics, psychosocial factors, and early life events affect later adult life, but it provides minimal insight into the processes underlying observed social relations. That is, researchers tend not to investigate the strategies families use, for example, to translate parental education (via involvement, increased resources, values for education) into achievement among their children. Moreover, research in this area has not, in general, focused on individuals from disadvantaged populations (with the exception of Portes and Wilson, 1976). Rather it has tried to understand social mobility in representative samples including all levels of the occupational strata.

Also falling into this first cluster of studies, is more recent work on factors contributing to educational achievement. In this literature, researchers continue to explore background variables, family, and individual characteristics contributing to academic success. However, more attention is given to ethnic differences and opportunity structures and their associations with educational progress, in particular the incongruence between family and peer support for educational success and attitudes toward education (Ogbu, 1978; Clark, 1983; Fordham and Ogbu, 1986; Steinberg, Dornbusch, and Brown, 1992; Brown, Steinberg, Mounts and Philipp, 1990; Sue and Okazaki, 1990; Mickelson, 1990). For example, Clark (1983) notes the diversity in the quality of family life among poor black families, and that these differences are reflected in children's school achievement. In fact, Clark argues that structural characteristics of families predict or explain little of the wide variation in academic achievement among children. He contends that the most important factors contributing to achievement are embedded within family culture, or the context of family life. In particular, he finds that high-achieving black children, whether from one-parent or two-parent families, come from home environments where there is frequent school contact initiated by parent(s), the child receives

stimulation and support from school teachers, and parent(s) expect the child to have an active and major role in his/her own schooling. Thus, according to Clark, when researchers note racial or social background differences between families, these are actually markers of group differences in the social organization of families, for example, in particular communication processes, rituals, and resulting cognitive and behavioral patterns.

Fordham and Ogbu (1986) propose a more macro-level approach focusing on a cultural-ecological influences on schooling. Expanding upon previous work conducted by Ogbu (1980, 1982) these authors suggest that black students' academic efforts are hampered by both external factors (limited opportunity structure) and within-group factors (limited peer support). This leads specifically to the burden of "acting white". That is to say, that blacks, in part because of whites' failure to acknowledge intellectual capabilities of blacks, and blacks' own subsequent self doubts about their intellectual ability, have come to define academic success as a perogative of whites. Academic striving is therefore seen as an emulation of whites, i.e., "acting white". Black students who are academically successful in the face of these factors tend to adopt specific adaptational strategies to not draw attention to themselves as academic achievers. Fordham and Ogbu report that successful black students often do not work to their full potential, fulfill the role of "class clown" or maintain a low profile socially.

Mickelson (1990) builds upon Fordham and Ogbu's work by exploring the incongruence between attitudes toward education and under-achievement. Specifically, Mickelson contends that attitudes toward education are multidimensional, and that black youth hold abstract as well as concrete attitudes towards education. Abstract attitudes are the dominant American ideology that views education as the road to social mobility. Concrete attitudes are class and race specific: they

are grounded in the differential realities that people experience (i.e., acting white hypothesis of education). Concrete attitudes can be identical or distinct from the dominant belief system.

Mickelson operationalized abstract and concrete attitudes via attitude scales among high school students, and calculated discrepancy scores, the difference between students scores on the abstract and concrete attitude scales. Interestingly she finds that blacks embrace the abstract ideology of education and present larger discrepancy scores than whites. However, abstract attitudes have no significant effect on grades, where as concrete beliefs have significant impacts on school performance.

Mickelson contends that understanding the "achievement paradox" may be a reflection of measurement inadequacies in research as well as conceptual ones. An individuals' belief systems are multidimensional and often contradictory, and scientific investigations must address this by operationalizing constructs in ways that tap the complexity of the conceptual framework being explored.

These studies specifically focusing on educational achievement augment the traditional status attainment literature. From these studies, one gains a better understanding of the processes through which background, family context, individual characteristics or societal forces influence academic success, particularly the impact of cultural or ethnic differences and associated school outcomes. However, these studies typically use small samples and focus mainly on educational achievement outcomes. The ability to generalize to other life outcomes, to the general population, or across various ethnic groups is limited.

Studies Exploring "Risk, Vulnerability, and Resilience"

The second type of work we reviewed within the sociology/social demography tradition consists of studies that move towards a more explicit exploration of risk or vulnerability and positive adaptation to life stress. These studies investigate a host of characteristics -- family, community and individual -- that promote or hinder positive response to stress or disadvantage. In these studies, efforts are made typically to define risk, or at least the context in which the term is used, for the particular study. Resilience or positive adaptation is also more clearly defined. For instance, Connell, Spencer and Aber (1993), in exploring human motivation as it applies to school success and failure among African American youth, defined risk through the respondent's "demographic location". This variable was operationalized as a composite measure reflecting a broad range of socioeconomic and demographic characteristics of the respondent's neighborhood, including poverty, female headship, race, high socioeconomic status, ethnic diversity, crowding, age structure, residential stability and joblessness. Educational outcomes were operationalized as risk markers for school departure and successful school performance including low school attendance, low math and reading achievement scores, course failure (risk markers), and high school attendance, percentile scores on standardized math and reading tests and grade point average (success markers). Their goal was to test for effects of demographic location and school engagement and related associations with self perceptions and self worth. They note that youth with positive outcomes were more likely to come from less disadvantaged families, and that disaffected students experienced different responses, within the family context, than students with positive achievement outcomes. In particular,

disadvantaged students received less support for educational endeavors and that these students tended to adjust their appraisal of themselves based on their positive or negative school outcomes.

Socio-demographic variables were also used to define youths' risk status in Pollard's study (1989) of academic achievers among the urban underclass. Specifically, minority status and low socioeconomic status were used to identify at-risk students, and achievement was measured in terms of current grade point average. Poor minority students who were high achievers were compared with poor minority students who were low achievers. High achievers demonstrated greater perceptions of ability and greater social support. They also tended to be better and more active problem solvers.

Dubow and Luster (1990) employ socioeconomic indicators of risk in studying adjustment of children born to teenage mothers. As their interest was the influence of early childbearing on developmental outcomes for the child, they included measures of mothers' characteristics such as mothers' age at first birth (< 17 years) low maternal education and low maternal self-esteem. Child adjustment was assessed in terms of behavioral problems and child's academic achievement in math, reading recognition and reading comprehension. They found that children with high rather than low levels of protective factors were less likely to experience behavioral and academic difficulties. Further, there were differential levels of impacts on behavior and achievement outcomes among at-risk children. Specifically, emotional support, but not cognitive stimulation, was linked with a reduction in behavioral problems for at-risk children. However, both emotional support and cognitive stimulation were associated with reductions in behavior problems.

In addition to a clearer definition of risk and resilient behavior, many of the studies exploring risk and resilience place their investigations in a theoretical context. Sugland, Blumenthal and Hyatt (1993) explore the mediating effects of family-based social capital (Coleman, 1990) on the successful

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transition to adulthood among at-risk young women. Social capital is seen as family investments in youth through such means as parent encouragement of education, availability of reading materials, and high parental aspirations for the youth. They define at-risk young women in terms of six sociodemographic indicators: (1) female headship; (2) low parental education; (3) large family size; (4) unskilled parental occupation; (5) maternal non-employment; and (6) limited community opportunities. Successful transition to adulthood is operationalized as educational attainment, consistent labor force participation, avoidance of welfare and poverty and above average per capita family income. In this study, social capital, or investment in children, was found to minimize the negative effect of a financially limited family background.

Other studies we reviewed employ a theoretical context. For example, Connell and colleagues (1993) described above, use a of self-systems context for understanding school success. Pollard (1989) employs Ogbu's caste-like minority, cultural-ecological framework, and Dubow and Luster (1990) explore the contribution of individual protective factors of the child relative to the caregiving environment. Their work is based on the models of Rutter (1987) Garmezy (1985) and Werner (1985) that suggest that positive self-concept is a protective factor for at-risk children.

These studies clearly move the sociological literature toward a more detailed understanding of how disadvantaged youth make positive adaptations to stressful family and life circumstances. Risk and resilience are more clearly and consistently defined, and studies attempt to explore the association of risk and mediating factors on resilient behavior within a specific conceptual or theoretical context. However, most of this work explores one facet of youths' lives -- family investments, individual protective factors, perceptions of ability -- on resilient behavior. A few of these studies (Sugland, Blumenthal and Hyatt, 1993; Furstenberg and Hughes, 1993) suggest that

there is a multidimensionality to protective factors. That is, multiple factors have the potential to operate protectively, and not all factors contribute to all types of resilient behaviors or outcomes. However multisystems analyses are not generally the norm in the studies that explicitly assess risk and resilience among youth.

Studies Presenting Conceptualizations of Risk and Resilience

The studies grouped in the last domain have the common characteristic that they apply the conceptualization of risk and resilience to intervention evaluations, particularly educational interventions. Most of the conceptual models on which the interventions are based come from Rutter's (1987) elaboration on the operation of protective mechanisms. Therefore, we begin this section with a brief review of Rutter's conceptual framework of protective mechanisms and vulnerability among children.

Rutter (1987) contends that there are four primary mechanisms for generating resilience among children exposed to stressful life events: 1) reduction of negative outcomes by altering risk or the child's exposure to risk, 2) reduction of negative chain reaction(s) following exposure to risk, 3) establishment and maintenance of self-esteem and self-efficacy, and 4) opening up of opportunities. In his first mechanism, Rutter proposes that the risk situation can be altered by changing the child's exposure to risk. For example, such programs as Head Start, or other pre-school or early school experiences may help to foster positive attitudes towards learning and provide opportunities for learning in a formal school setting.

Rutter's second mechanism involves reducing the effect of negative chain reactions that

follow risk exposure. These may be seen as secondary intervention programs (i.e., programs that intervene after maladaptive/negative behavior has emerged). Programs for parenting teens or family support centers are an example of services that can minimize the negative effects of early pregnancy and parenthood.

The third mechanism pertains to an individual's perceptions and feelings about him/herself, the context in which he/she lives and one's ability to handle daily hassles. Improving self-concepts can only be realized through successful or positive adaptations to exposure to stress, and through the relationships one forms over the life course.

The fourth mechanism involves larger societal forces that provide opportunities for education, employment, mentoring or apprenticeships. Factors such as a sound curriculum, adequate counseling, extracurricular activities, and community involvement all represent opportunities for enhancing resilience among disadvantaged youth.

Rutter's framework illustrates the complexity of the process of resilience, but he adds additional complexity by making distinctions between *risk* and *vulnerability*. He notes that risk should not be equated with vulnerability, rather that vulnerability is the expression of risk. That is, not all youth deemed to be exposed to stressors, either socioeconomic disadvantage or psychological stress, will ultimately demonstrate the same propensity (vulnerability) for poor adaptation. Conversely, not all successful youth are resilient. That is, not all youth show the same probability or susceptibility to difficult life situations. He also encourages researchers to go beyond the unidimensionality of resilient behavior and to explore several facets of adaptive behavior.

As we mentioned, most of the studies focusing on conceptualizations of risk and resilience incorporate some aspect of Rutter's protective framework into their models. For example, Nettles

(1991) expands on the fourth mechanism of Rutter's model by assessing community involvement and impacts on academic success among disadvantaged youth. Nettles' study is a review of 13 evaluations of community-based programs focusing on the academic development of young people. For the sake of her review, she defines at-risk youth as educationally disadvantaged, or students who face multiple impediments to success in school. Community involvement is operationalized as actions that organizations and individuals take to promote student development. Four processes of social change are involved: 1) mobilization, 2) allocation of resources, 3) instruction, 4)conversion. *Mobilization* is the act of increasing citizen and organizational participation in educational processes of young people. *Allocation* is the next step in the chain of events and occurs when communities or entities provide resources (financial, social support, commitment of time and energy, or special services) to children and youth in need. The third piece of the involvement model is *Instruction*, where communities assist students in their intellectual development by helping them to learn specific educational skills, as well as new rules, values, and norms about education and social relationships. Finally, *conversion* is the process of bringing students from one belief or behavior stance to another. That is students deemed to be educationally disadvantaged or at a deficit are changed into interested, achieving, involved students.

Nettles places these processes within a context of community structure and community climate. Community structure represents the social characteristics, physical features, and educational resource base of the community. Such elements are embodied in the level of urbanicity, the nature or structure of the local school system, the physical location of schools, and the quality and quantity of fiscal and human resources for education. The community climate represents the norms, values and rules regarding education and educational achievement, and rules that serve to maintain

community order and control. Climates where education is a high priority reflect standards about achievement, school attendance, and post-secondary education. This aspect of communities also highlights cultural elements that influence involvement and student development. Community involvement, through the process of mobilization, allocation, instruction and conversion, enhances student involvement in school and ultimately school success.

Her review suggests that community involvement can have positive influences on disadvantaged youth, although most of the impacts are short-term. The Parent-Tutoring Program (Mehran and White, 1988) is an example of positive short-term impacts on student achievement as a result of community involvement. The Parent-Tutoring Program, based in a small western city, was designed to randomly select parents, train them in tutoring techniques and then randomly assign them to students to provide tutoring in basic reading skills. Those students who participated at planned levels, showed substantial gains in reading skills compared with non-participants.

Similarly, participation in another intervention described by Nettles (1991), the PUSH-EXCEL Project (Murray et al. 1982), also influenced academic success among youth. In particular, grade point average increased after participating, even after pre-program grades were considered. PUSH-EXCEL, located in Denver, was a school wide program featuring inspirational speeches, incentives for achievement, enrichment activities, and parent and community events. The program assessed personal efficacy, participation in extracurricular activities, academic self-concept, and school-related behavior such as grades and attendance.

Winfield (1991) uses Rutter's framework to provide a context within which to understand a series of studies on resilience in schooling among African American youth. Specifically, Rutter's four protective factors are schematically crossed with two levels of school interventions, and three levels

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of community interventions to form a grid. Each cell within the grid identifies a strategy of intervention addressing each of Rutter's protective factors. As one example, Clark (1991) conducted a study on school-based interventions designed to promote self-esteem and self-efficacy. She contends that adolescents have various types of identities with important consequences for success in school. For example, youth with a raceless or bicultural identity are less at-risk for school failure, but are at an increased risk of alienation from peers. Positive peer interactions in multicultural settings and the development of social support systems in and out of school are important. In particular, mentorships, or activities that make students feel connected with the school environment are beneficial to students' self-esteem and self-efficacy.

POINTS OF SIMILARITY AND DIFFERENCE IN THE STUDY OF RESILIENCE WITHIN THESE RESEARCH DISCIPLINES

A multidisciplinary approach to resilience, drawing on both the developmental and sociological literatures, could strengthen future research as well as program development focusing on youth. To arrive at a multidisciplinary perspective, however, we need to be explicit about commonalities and differences in the disciplinary approaches.

First, we see great similarity in the underlying conceptualization of resilience across disciplines. In each discipline, studies have as their starting point that children or youth enter the situation of interest at some unique disadvantage. The disadvantage may be limited financial resources, limited human capital, social deficits, or it may be family dysfunction or psychopathology. There has been a tendency for sociologists to define this disadvantage as a status variable, (i.e., low parental education, female headship, poverty). Within the developmental literature, risk status is

also defined in terms of such psychological variables as family dysfunction, stressful life events, or daily hassles. Resilient behavior is operationalized in terms of attainments in the sociological literature (academic success, economic or financial stability) but as developmental status (cognitive development or emotional wellbeing) in the developmental literature.

Both disciplines also identify aspects of the family, community environment, social networks, and individual characteristics (i.e., self-esteem, IQ, coping skills, problem solving skills) that can mediate risk and contribute to resilient behavior. The lists of particular protective factors provided within each discipline overlap but also show somewhat differing emphases. For example, developmentalists tend to explore such as dispositional characteristics as locus of control, coping skills and IQ. Family and community protective factors identified in this literature include warmth and affection in parent-child relations, absence of family dysfunction and discord, and positive school environments and social support. Sociologists also include psychosocial mechanisms as protective factors, although there is less emphasis on family context (i.e., family dysfunction or discord) and greater emphasis on parental aspirations, self-esteem, family support and support networks. The evidence suggests that both types of mechanisms may be important contributors to resiliency.

The disciplines differ, however, in their preferred terminology and to some extent in their definitions. Table 1 highlights the definitions of risk, vulnerability, protective mechanisms and resilience summarized by Rutter (1987), which provides a logical place from which to begin to assess the commonalities across the child development and sociology disciplines. It is quite clear that both disciplines consider the same constructs, and often attach the same meaning to the same constructs. The distinction is mostly in the terms used to describe the constructs of risk and resilience. For example, risk and stress are the two terms used by researchers in these two disciplines to describe

the compromised beginnings of children and youth. While sociologists prefer the term risk, developmentalists use both terms.

Vulnerability is a construct most common to the development literature. Distinguished primarily by Rutter (1987), vulnerability illustrates the process of susceptibility to risk/stress given the presence or absence of protective factors. Sociologists do not explicitly employ the notion of vulnerability in their work. However, implicit to the majority of sociologic work on risk and resilience is a sense of heightened or diminished susceptibility to risk given various mediating factors.

Protective factors are the characteristics of family, school, and community life that mediate the negative effects of risk or stress. These include parental support, encouragement, availability of role models/mentors, opportunities in the community for work and school advancement. The disciplines are consistent in pointing to the importance of protective factors in mediating risk/stress.

Resilience is the ability to "bounce back" or recover in the face of risk or stress. The evidence across fields indicates that resilience is stress/risk-specific and does not involve complete invulnerability in a holistic sense. Rather, one is resilient in the face of specific stressors, such as educational disadvantage or psychological dysfunction. Indeed, as we have noted above, some work shows that children with high academic success show greater signs of depression and anxiety.

SUGGESTED CONCEPTUAL FRAMEWORK FOR UNDERSTANDING RESILIENCE BUILDING ON BOTH DISCIPLINES

Our review of the child development and sociology literatures suggests a particular way of conceptualizing risk and resilience. Figure 1 illustrates the specific framework we contend will

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enhance the understanding of risk vulnerability, and resilience among disadvantaged youth. Our representation reflects a multidisciplinary approach with the hope that it will allow for a more comprehensive understanding of the process through which disadvantaged youth succeed against difficult life circumstances.

As with any framework, there are assumptions, and we highlight those assumptions before proceeding to a full description of the framework. First, we begin our framework with youth who are socially and/or economically disadvantaged. This is not to presume that less disadvantaged youth do not fail or that factors similar to those included in our model do not operate similarly for advantaged young people. Rather, we initiate our discussion with disadvantage in light of the research focus and the political concern about how to foster resilience among youth from limited financial and social backgrounds.

Second, in keeping with our review of the literature, and particularly Rutter's work, our framework assumes protective mechanisms mediating risk/stress. Our literature review suggests that there may be interactions between factors contributing to positive adaptation. Further, not all intervening factors affect different outcomes in the same way (Furstenberg and Hughes, 1993; Sugland, Blumenthal, and Hyatt, 1993), and not all factors are consistent in their impacts across gender or ethnic groups (Brown, 1993).

Third, the framework we propose is dynamic. That is, resilience evolves over time. Therefore, the factors contributing to that process, their relative level of impact or importance, may be different for different life stages or for different outcomes or forms of resilience.

Fourth, the framework is set within the larger social, political context. Thus, social opportunities may influence many of the individual, family, and school mechanisms we will describe.

Given these assumptions we attempt to illustrate the relationship between disadvantage, protective factors and resilience among youth. In figure 1, as noted, our model begins with exposure to social/economic disadvantage, social or psychological stressors. Individual characteristics, family, school, peer, and community factors combine through life experiences to provide protective or undermining mechanisms. Depending on the combinations of these factors, disadvantaged youth may proceed on to one of two trajectories at any given point in time and for any particular outcome domain: the invulnerable trajectory leading ultimately to resilience, and the vulnerable trajectory leading to poor adaptation. Early indicators of the trajectory an individual is on are success markers and risk markers. These intermediate points represent short-term, proximate determinants of resilience or failure. Repeated emergence of success or risk markers leads ultimately to resilience or vulnerability. The full combination of initial disadvantage, together with individual characteristics, the family, school, peer and community context, and experiences with risk and success markers, constitutes the vulnerability/invulnerability process.

The process of vulnerability/invulnerability is highly malleable. For example, the dual arrows in the boxes imply that there are reciprocal effects in the process. That is, any one of these dimensions (i.e., individual, family, peer, success markers) can influence the other dimensions and provide feedback to perpetuate positive or negative behavior. For instance, good grades may foster self-esteem. This in turn might lead to subsequent success markers. Conversely, repeated negative experiences can lead to decreased self-esteem, with further negative feedback loops.

Although our diagram illustrates two distinct trajectories, it is not meant to imply that movement into one path precludes movement into the other, or that its too late for resilience to emerge at any one point in time. On the contrary, the dotted line dividing the invulnerable and

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vulnerable pathways suggests that movement in and out of vulnerable/invulnerable paths for any one outcome is possible and highly likely, particularly over time, and across various types of experiences. Individuals may cross these trajectories during the vulnerability/invulnerability process as they encounter protective or detrimental experiences. For example, youth on the invulnerable track may encounter a reduction in support, or little encouragement from teachers, or lose access to an important role model or mentor who has been removed from his/her life due to death or relocation. Such a youth, doing well initially, can move into a vulnerable trajectory after encountering a change in access to the amount or type of protective situations. This may contribute to a reduction in self-esteem, diminished school success, and further feedback through this kind of loop. At any time, however, particularly if exposure to limited protective factors is relatively brief or small in magnitude, youth may bounce back and cross back into the invulnerable, resilient pathway. Conversely, a youth who is initially on the "vulnerable" track, may encounter role models, increased encouragement from teachers or community involvement, and can migrate towards the resilient trajectory. Consistent exposure to protective factors can work to keep this individual on the resilient trajectory.

We perceive, however, that the ability to migrate from positive to negative poles becomes progressively more difficult, however, as one demonstrates multiple markers of poor achievement or success, and as one moves through the life course. Thus, while our model suggests that intervening on the behalf of disadvantaged youth is possible, there may be a point both in time (life course) and in terms of the number of experiences or the magnitude of positive or negative experiences, beyond which it may be difficult to successfully intervene (i.e., bring an individual from vulnerability to an invulnerable trajectory).

We note further that we perceive protective mechanisms as outcome specific. That is,

resilience in the form of academic success cannot be used as a proxy for other forms of resilience, such as emotional well-being, or financial stability in young adulthood. For example, as we have noted, some research indicates that adolescents with high academic success can simultaneously demonstrate increased states of depression and anxiety. Thus, the factors contributing to academic success, may be less protective against anxiety and depression. Clearly, there needs to be an exploration of multiple resilience indicators, and assessments of the range of factors that contribute to a range of resilient characteristics. In addition, these protective mechanisms may be gender, ethnic, and age specific as well. The community climate and the cultural context may be particularly important with respect to values regarding education, values regarding help-seeking behavior, or perceptions of opportunity.

Finally, we see social policies and community policies about opportunities for youth as important mediators of resilience, especially when other protective factors are limited. Social policies and opportunities can further enhance strong networks currently in place.

SUMMARY AND CONCLUSIONS

Across the child development and sociology disciplines a major commonality is an underlying model that includes the same basic components of initial stressors, mediating or protective factors, and outcome variables. However the disciplinary approaches tend to differ in terms of variables of interest and operationalizations at each point in the underlying model. For example, whereas sociology and social demography define initial disadvantage or stress in terms of such social status variables as poverty status and parental marital status, developmental psychology and

psychopathology focus on variables that describe children's more immediate or proximal experiences (e.g. family conflict, daily hassles) and markers of the psychological wellbeing of family members (e.g. maternal psychopathology, paternal criminality). In terms of outcome variables, sociology and social demography are likely to examine markers of attainment in youth or adulthood, such as years of education and occupational status. Studies in this tradition may include also markers of risk, such as school grades and risk taking behaviors, that are predictive of these eventual outcomes. By contrast, studies in the developmental psychology or psychopathology tradition are more likely to examine measures of developmental status, such as teacher report of adjustment or social competence, as outcomes.

As we have noted, the two research traditions tend to focus on quite different portions of the life span. Sociology and social demography focus almost entirely on the transition to adulthood, following adolescents into young adulthood. By contrast, studies in the developmental psychology and psychopathology traditions tend to focus much earlier in development, rarely even reaching adolescence. Looking across the disciplinary approaches, it is noteworthy that we have little knowledge about resilience across the lifespan, in long-term longitudinal studies.

Results in the developmental psychology/psychopathology traditions suffice to caution us that findings should not be assumed to generalize across outcome domains (e.g. from cognitive development to adjustment or social competence) or across population subgroups. These studies also point to the importance of probing the processes underlying risk and protective factors, that is asking why these variables shape development in the ways documented. Yet research in the sociology and social demography traditions cautions us that samples must be of sufficient size to permit the examination of multiple variables simultaneously, and of sufficient representativeness to

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permit examination of the generalizability of findings. Researchers within both traditions identify a need for future work that focuses on positive outcomes among children at risk in terms of poverty and minority status. There is also accord across disciplines in calling for work that involves more detailed and careful operationalizations of both risk and protective factors.

The analyses presented elsewhere in this report on achievement among at-risk youth fall within the sociology and social demography traditions. These analyses were carried out within large and representative data sets, focus on the transition to adulthood rather than earlier period of development, and examine adult attainment variables as outcomes. However this work also responds to a number of concerns that we have identified across the two research traditions. Specifically, these analyses respond to the call for focus on positive developmental outcomes despite disadvantage among adolescents. In addition, our research attempts a more detailed operationalization of protective factors through the careful definition of human capital variables.

Our analyses were inevitably constrained by variables available within existing data sets. Turning toward the future, our brief literature review carries several implications for further data collection and analyses. First, such work should build on both research traditions in defining initial risk or disadvantage. That is, the list of variables should include both status variables (e.g., poverty status, parental marital status, ethnicity), and more proximal variables (e.g. parental conflict, daily hassles). We will only begin to understand the relative importance of each of these variables when studies encompass a more exhaustive list. Second, the study of resilience should permit us to follow children over longer developmental trajectories. We need studies that take a life-span development perspective on resilience, rather than focus solely on early development or the transition to adulthood. Third, we need to continue the progress towards greater differentiation in our definitions

of both risk and protective factors. Sharper and more detailed definitions of these variables and clear conceptualizations of the linkages among them are essential if we are to move towards greater understanding of the processes underlying resilience in the face of obstacles to positive development.

Table 1: Definitions of Risk, Vulnerability and Resilience Commonly Used Across Developmental and Sociology Disciplines

	Definitions of Risk, Vulnerability, Resilience Commonly Used In Developmental and Social Science Literatures		
Risk	Vulnerability	Protective Factors	Resilience
Risk: A factor or process without a modifying influence or influences would lead to a poor outcome. A variable may be a risk factor in one situation, but a vulnerability factor in another (Rutter, 1987 p. 317). Thus it is more useful to talk about processes and mechanisms. Risk has a direct influence on a subject, vulnerability an indirect one. STRESS: often used interchangeably with risk. Stress, however, has several different meanings that can confuse discussions. In one sense it is a risk variable, a stressor. In another sense it is a physical or mental state that is the result of pressures from a yet another variable or process. For this reason, we prefer the term risk or stressor when referring to a variable or process that exerts pressure on a subject.	vulnerable serves to describe an individuals susceptibility to negative outcomes. Vulnerability is determined by the process of protective or non-protective factors. It is the expression of risk (Swanson and Spencer, 1991), not risk itself.	MODIFYING INFLUENCE(S) - factor or process that serves either to protect or to make a subject more vulnerable to risk. A protective factor or process ameliorates the subject's response to risk, that is it strengthens a person in the face of risk. A vulnerability factor intensifies a subject's response to risk, that is it weakens a persons response in the face of risk and makes them more susceptible to the risk. Rutter (1987) argues that the choice of the term, protective or vulnerability, should depend upon the focus of the research. If interest is on the positive side, use protection; if interest is on the negative end, use vulnerability. Regardless of which term is used, the basic mechanisms identified remain the same. The assumption is that a moderating influence is really a continuum with protective being one extreme and vulnerability the other.	RESILIENCE: a latent variable or process that is dependent upon the outcome or outcomes being used in any particular study. Resilience, in essence, is determined by the outcome. If a person is deemed to be doing well, then that person is called resilient. Interestingly, there is no antonym to resilient other than succumbing or failing. Resilience is not a fixed attribute, but rather dependent upon the risk encountered and the circumstances at the time (Rutter, 1987).

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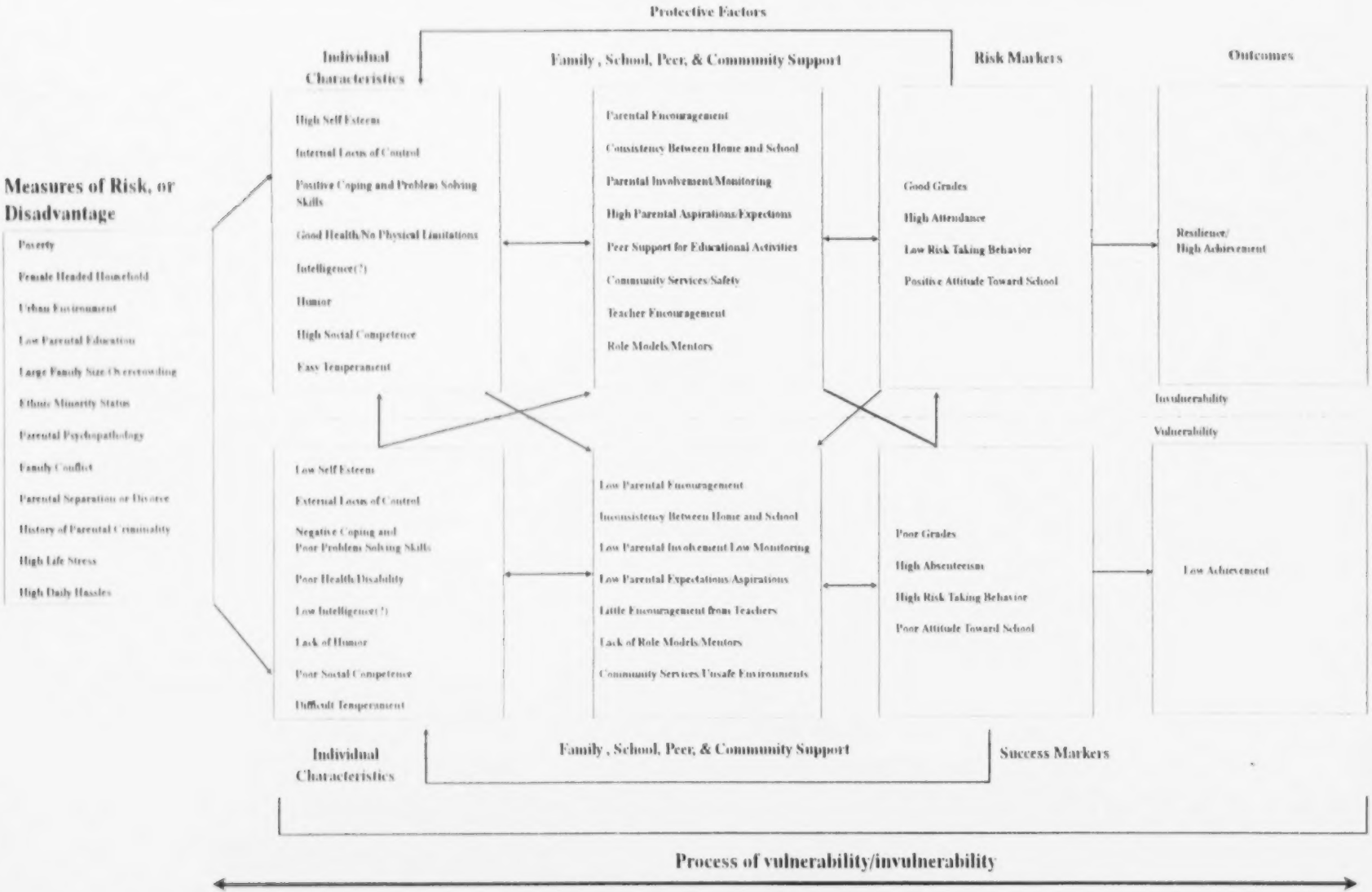
Figure 1
Conceptual Framework: Vulnerability and Resilience Among Disadvantaged Youth



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